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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,094	11/17/2003	Kia Silverbrook	ZG004US	8566

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AUSTRALIA

EXAMINER	
DO, AN H	

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/713,094	SILVERBROOK, KIA	
	Examiner	Art Unit	
	An H. Do	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/112,767.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/17/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/112,767, filed on July 10, 1998.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 17 November 2003 was filed and is being considered by the examiner.

Specification

3. The disclosure is objected to because of the following informalities: Applicant needs to update all continuing data under cross-references.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al (US 5,530,792) in view of Mishima et al (US 6,191,405).

Ikeda et al disclose in Figures 4, 9, 11 and 13 the following claimed features:

Regarding claim 1, a print engine controller (Figure 4) for a pagewidth printhead (2) having at least one printhead chip that spans a print area, the controller being

connectable to a memory device (RAM 11), a micro-processor (MPU 9) and the, or each, printhead chip, the controller comprising:

-control circuitry (21) for permitting external clients to read and write registers and to read and write to the memory device (RAM 11);

-a data bus (DB2) that is connectable to the memory device (RAM 11);

-a data interface (18) that is connected to the data bus (DB2) to be interposed between the data bus (DB2) and the microprocessor (MPU 9), in use, so that the microprocessor can write data to the memory device;

-a serial interface (12) that is connected to the data bus (DB3) to be interposed between the data bus (DB3) and the micro-processor (MPU 9), in use, so that the micro-processor can access the registers of the control circuitry and registers of the memory device;

-formatting circuitry (21a) that is connected to the data bus for receiving the dot data and for formatting the dot data for printing; and

-a printhead interface (13) that is interposed between the formatting circuitry and the printhead chips, in use, to receive the dot data from the formatting circuitry and to communicate the dot data to the printhead chips.

Regarding claim 2, in which the control circuitry (21) is configured to permit the reading and writing of data in 32 bit data blocks.

Regarding claim 3, which includes a random access memory device controller (CS3) that is connectable to the memory device, which is a random access memory device (RAM 11), such that, in use, the memory device controller is interposed between

the memory device and the data bus, a memory device interface being interposed between the memory device controller and the data bus.

Regarding claim 7, in which the formatting circuitry is configured to format the dots for predetermined print lines.

Ikeda et al disclose the claimed invention except for reciting the following:

Further regarding claim 1, page expansion circuitry configured to receive data representing compressed pages and to render that data into dot data representing dots.

Regarding claim 5, the page expansion circuitry is configured to render the compressed page data into bi-level dot data.

Mishima et al teach in Figure 7 the following:

Further regarding claim 1, page expansion circuitry (302) configured to receive data representing compressed pages and to render that data into dot data representing dots.

Regarding claim 5, the page expansion circuitry (302) is configured to render the compressed page data into bi-level dot data.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the page expansion circuitry configured to render the compressed page data into bi-level dot data, as taught by Mishima et al into Ikeda et al, for the purpose of binarizing the image data according to the parameters set by a CPU (column 7, lines 18-21).

6. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al (US 5,530,792) in view of Mishima et al (US 6,191,405) as applied to claim 1 above, and further in view of Matsushima (JP 401048124A).

Ikeda et al as modified by Mishima et al disclose the claimed invention except for reciting the serial interface is a low speed serial interface and the data interface is a high-speed interface.

Matsushima teaches the serial interface is a low speed serial interface and the data interface is a high-speed interface (Abstract) for the purpose of efficiently transfer data between interfaces different in data transfer speed.

It would have been further obvious to one having ordinary skill in the art at the time the invention was made to have the serial interface is a low speed serial interface and the data interface is a high-speed interface, as taught by Matsushima into Ikeda et al as modified by Mishima et al, for the purpose of efficiently transfer data between interfaces different in data transfer speed (Abstract).

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to An H. Do whose telephone number is 571-272-2143. The examiner can normally be reached on Monday-Friday (Flexible).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AD
December 9, 2005

An H. Do
Examiner
Art Unit 2853